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(2020 ID: 2573) Disruptive Innovation Practices in Secondary Schools: Four Case Studies

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The objective of this research is to identify and select educational projects that are implementing emergent pedagogies and disruptive practices. These projects are proposed as case studies focused on junior and senior high schools in different curricular fields and representative of new ways of connecting the school with the social context, in the framework of "knowmadic societies". The curricular is understood in a complex and open sense, interested in the social and cultural experiences of students in their different environments, breaking with the tradition of the curriculum focused on academic subjects.

In the last years, the research team has been developing several case studies in the framework of the new learning ecologies in a plurality of contexts, agents and knowledge (Martínez-Rodríguez and Fernández-Rodríguez, 2018), with the purpose of knowing and understanding a diversity of educational ecosystems where learning takes place.

We develop four case studies characterized by “disruptive innovation”. This concept was coined by Christensen (Christensen, 1997; Christensen and Horn, 2008; Christensen, Horn, and Johnson, 2011; Christensen, Raynor, and Mcdonald, 2016a and 2016b) and it is constituted as an explanatory and predictive theory about innovation in organizations. To introduce this key concept in our work, we follow the Christensen´s elaboration applying his principles in the field of education.

Disruptive innovation consists of three main components:

(a) Firstly, as a result of multiple factors, education is a process that demands so many new realities that exceed the capacity of education systems to face them, leaving multiple opportunities opened (gaps/windows) to meet very specific needs of teachers, students and their families.

(b) Secondly, it is very important to differentiate two types of educational innovation: "sustained innovation" and "disruptive innovation"; the first represents a superficial change, it is compatible with the system, and generalizable; the second arises to meet new needs, it is located within the limits of the system and it is contextualized.

(c) And, thirdly, the predominant vision of the teaching-learning process that the educational community, the educational administrations and also the educative industry promote sustain, promote sustained innovations and limit the introduction of disruptive innovations in the educational system. Consequently, disruptive innovation arises from social demands towards education and it is generated within the "gaps" or "windows" of opportunities that the mentioned educational agents can take advantage out of the predominant views on teaching-learning process.

In the cases described in this paper, examples of the "non-consumer" concept of disruptive innovation theory can be observed. We highlight the following: (1) an urban Secondary school that needs to “re-invent itself” to overcome high school dropout fees; (2) a rural one that needs to overcome demotivation and attract its students to knowledge and learning; (3) a class group of an urban Middle Schools that need to express and communicate their vision of a social phenomenon beyond the classroom; (4) or a group of teachers and students who learn collaboratively about technologies with a social perspective. In these contexts, disruptive innovations are generated because processes and practices that used to do not have alternatives; they have discovered a “window of opportunity” and they invent new ways of being and doing. They are part of the system, but do not create a model directly acceptable to the system. Hence, sometimes they generate «noise» and they are not easily «understandable». Also, sometimes they frequently carry them out «doubt» on their effectiveness, or they observe them as anecdotal episodes within the daily evolution of the classrooms. This generate the opportunity to continue rethinking and from the outside (as researchers) find the reasons how and why these innovators carry out their disruptive projects with such determination.

Methodology, Methods, Research Instruments or Sources Used
The research is interpretive, hermeneutical, collaborative, non-invasive and negotiated and is developed in two phases:
The first phase corresponds to the selection and development of the case studies (Stake, 1995; Gomm, Hammersley and Foster, 2004), which will be part of the project. The definition of problems or research topics (Issues) of these cases will focus on the following two questions: (1) What are the opportunities, challenges and problems generated by the network culture and the “knowmadic” scenarios for development of pedagogical proposals for creative experimentation and collaborative learning in Secondary Schools and classrooms? and (2) What are the limitations and possibilities of Secondary schools for the design and implementation of educational projects based on the production, research and dissemination of content in a hyperconnected society?
For data collection, the interview with the teachers of the centers, students and families, where appropriate, was used. Likewise, participant observation was carried out, in which, in addition to the field notes, video recordings of the activity of the centers were made.
The second phase corresponds to the launch of the prototype of «Laboratory of Emerging Pedagogies and Disruptive Practices» (PE-PD) that has been developed in the form of an open web platform for the dissemination and communication of the innovations analyzed. Available at https://labnomadis.com/
For case selection it took into account the 4 strategic axes defined for the implementation of the laboratory, selecting centers which were developing innovations in relation to them:
- Transmedia competencies and informal learning strategies.

Objective: Identify, describe and analyze educational practices based on the use of transmedia communication and digital networks inside and outside the school.

- Technological mediations in the development of emerging pedagogies. Objective: Systematize educational practices of ICT used taking advantage of its communicative, informational potential and identify learning spaces and ecologies away from linear models and the prescribed curriculum.

- Disruptive intervention strategies through art and visual culture.
Objective: To identify contexts for the artistic experience in the school and public space, which incorporate forms of production and inquiry of visual, poetic, corporal, musical and narrative type.

- Critical Literacy practices in the digital, intercultural and multilingual society. Objective: Identify, analyze and disseminate educational projects based on the training of readers of all kinds of cultural texts.

Conclusions, Expected Outcomes or Findings
Acording to the data obtained, it is evident that the disruption arises in a context of specific needs and it has its origin in the school itself, however, there is a tendency to keep it out of the "institutional" so that they don´t get "contaminated." If these practices become "curricular", they lose all their meaning and attractiveness, mainly due to the evaluation dimension. Knowledge is generated and shared from diverse sources, being communication and transferability a very relevant factor in this type of disruptive practices. Informants consider, in this connection, that pedagogical approaches are very decisive for these attitudes towards disruption. They are schools that perceive the limitations for maintaining a pedagogical approach focused on content, final evaluation and school discipline. Disruption is a necessity to respond to their serious educational problems.
It is observed a decisive influence in the organizational culture showing a distributed leadership in the management of disruptive practices, including, in some cases, students and families. In this sense, the obstacles are not always in the upper organizational positions. Rather, they consider that the role of the management teams in promoting and supporting these initiatives is very relevant.
In all cases the subjects present the disruption as a practice for "production," which generates "resources" of a technological, social, educational or political nature. The disruption needs to be visible in order to be valued in its entirety. It's necessary to avoid that the practices remain hidden for the educational community and for the general public.
The disruption, for most subjects, has clear emotional elements. It arises from a strong intrinsic motivation and a clear need to share ideas and competencies, but it is maintained for the emotional receptivity of others, especially students

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